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UNEXPLAINED PERFORATION OF THE ESOPHAGUS IN A GIRL TEN YEARS OLD.

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On November 24, 1910, I was called by Dr. F. to see his patient Gertrude G. 10 years of age. Family history, negative. Previous history, no similar attacks or anything relating to the present condition. She was perfectly well and attended school the day before her present illness, which began about 10 hours before my arrival. She ate a light supper, consisting of tea, bread and butter. During the night the child was suddenly awakened from her sleep with nausea and pain in the upper part of the epigastrium. She vomited several times small quantities of greenish material. No blood. Her bowels moved once during that day, following a cathartic. Her condition at the time I saw her was one of profound shock, marked pallor, the pulse rapid, irregular, and at times imperceptible. Her respiration was rapid and stertorous, lips cyanotic, and semi-consciousness. The patient complained of pain in the epigastrium and upon palpation she was found to be exquisitely tender on the right upper half of the epigastrium. There was dullness and flatness in the right hypochondrium, and marked tympanitis on the left side and epigastric region. The doctor in attendance had given calomel in small doses. The stomach pump was not used. The history and general appearance of the patient, with the rapid and stertorous breathing suggested perforation near the cardiac end of the stomach which I ventured to diagnose. The patient was sent and admitted to the Jewish Hospital of Brooklyn within an hour.

*Specimen presented.

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There the following observations were made:

Temperature 100° F. Pulse 118. Respiration 32.

General Condition.—Fairly well nourished, mucous membranes pale and cyanotic, hands and feet cold and clammy, lips and cheeks cyanotic, semi-stuperous. Does not respond well to questions or orders. Tongue dry and coated. Pupils, small, equal (not contracted), react to light and accommodation. No rigidity of the neck. Breathing very peculiar. Inspiration harsh, and strained, expiration noisy. Voice appears husky. Throat negative. Lungs, right side: Posterior from fifth to seventh intercostal spaces, a small area is found which gives diminished resonance and breathing is hard. Left side, negative. Heart, no sign of enlargement, sounds rapid, but clear and regular. Accentuation of second pulmonic sound. Abdomen moderately distended, tenderness to palpation in epigastrium, where muscles are somewhat more rigid. Liver percussion displaced upwards. No other points of tenderness, no mass palpable. No visible peristalsis. Reflexes normal. Blood examination, leuc. 20,800; polym. 85% ; mono. 15% red blood cells, 4,789,000; hemoglobin, 90%. Urine examination, normal.

Dr. Wm. Linder who was called to see the patient before operation elicited from the mother a statement that the girl swallowed a pit of an orange in the evening before she took sick, whereupon she gave her some Weber tea.

The rapid stertorous breathing impressed the doctor with the theory that we had before us a case of foreign body in the bronchial tubes and that the operation should be deferred for the present.

Dr. Jacob Fuhs who was in the hospital at the time was called in to see the patient. He was inclined to favor the theory of foreign body in the bronchi, and believed the child to have basal pneumonia. Owing to the semi-consciousness and low vitality of the patient he advised against an operation. The mental condition of the child became dimmer, respiration, more stertorous, pulse feeble, and finally went into coma and died within 18 hours. Her temperature before death was 105° F., pulse 140, respiration 48.

Autopsy held at the Jewish Hospital on November 25, at 4 p.m. by Drs. Wuest and Blatteis. Case Gertrude G. age 10.

The following is a resume of the lesions found, *viz.*,

Five cm. above the cardia there is seen along the left edge of the esophagus a narrow slit 1 c. long with edges perfectly smooth; the edges are not surrounded by any hyperemic or ulcerative changes either externally or internally.

On entering the left pleural cavity there is noted the presence of about 500 cc. dark green fluid. Pressure upon the stomach which was considerably distended with fluid produced a gush of a similar fluid through the slit-like opening into the pleural cavity. The fluid in the cavity and in the stomach showed food debris, mucus all bile tinged. Careful examination of all contents failed to reveal any foreign body.

Examination of the intestine showed at the ilio-cecal valve and scattered over the cecal mucous membrane a few deep red, swollen patches corresponding to swollen Peyer's lymph nodes; appendix normal. No foreign body found anywhere along the intestinal tract.

The lungs showed congestion of both bases.

Section of tissue forming the margin of the slit in the esophagus showed histologically only a moderate congestion but no ulceration or necrosis. Sections of the swollen Peyer's patches show a pronounced hyperplasia of lymphoid tissue with edema and congestion, evidence of an acute irritative process.

The fluid in the left chest was noticed before any incision whatever was made after the removal of the sternum.

No other lesions were noticed.

Rupture of the esophagus has been observed to occur spontaneously or without apparent cause in rare cases. The majority of these were males and alcoholics. The accident occurred suddenly as a rule after a hearty meal, usually after vomiting or violent concussion of the body.

The laceration involving all coats is always found close above the cardia and is usually longitudinal. The opening extends into the posterior mediastinum and at the same time into one or both pleural cavities, allowing the contents of the stomach to enter the latter.

Weeney recently collected 17 authentic cases of rupture of the apparently healthy esophagus.

Zenker and Ziemmsen, have pointed out that this is probably due to esophagomalacia of the lower portion of the esophagus, caused by autodigestion occurring during life as a result of some peculiar

circumstances, so that the exciting force, perhaps a contraction of the esophagus itself, produces torsions of the latter. Mechanical violence (crushing between carbuffers) striking against the back and the pit of the stomach, may produce rupture of a perfectly normal esophagus, in the same way that rupture of the intestines is produced by such causes.

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